

AL.D.2009-126

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MARCH 2009

# HIGH SCHOOL FLEXIBILITY ENHANCEMENT: A LITERATURE REVIEW *EXECUTIVE SUMMARY*

High school flexibility enhancement is a process of examining the current high school system and making changes to increase student choice and flexibility. This document is a literature review of the high school flexibility enhancement process. It includes a brief history of the process, a review of the literature on the process, and a summary of the findings. The findings are presented in a series of recommendations for the Alberta government to consider as it continues to develop its high school flexibility enhancement plan.

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### ALBERTA EDUCATION CATALOGUING IN PUBLICATION DATA

Alberta. Alberta Education.

High school flexibility enhancement : a literature review : executive summary.

ISBN 978-0-7785-8137-6

1. Education, Secondary – Alberta – Evaluation.
2. Educational change – Alberta.
3. High schools – Alberta – Administration.
4. School management and organization – Alberta.

I. Title.

LB2822.75.A333 2009

373.26

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This EXECUTIVE SUMMARY and the complete literature review are available on the Internet at:  
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## PURPOSE

The literature review entitled *High School Flexibility Enhancement: A Literature Review* is provided as a support resource for school administrators involved in Alberta Education's *High School Flexibility Enhancement Project*. It is intended to *help inform* the development and implementation of innovative, educationally sound high school redesigns in Alberta; it is *not necessarily intended to prescribe* any particular set of foundational principles, high school redesign models or combination of supporting strategies.

The literature review provides support in the form of a brief history of Alberta Education's *High School Flexibility Enhancement Project*; a definition and discussion of the Carnegie Unit; an overview of foundational principles, supportive strategies, and evident benefits and challenges related to high school redesign; and descriptions of several North American high school redesign models and initiatives.

The following *EXECUTIVE SUMMARY* outlines the background of the *High School Flexibility Enhancement Project* and highlights the key findings of the literature review. Links to additional resources and suggestions for further reading can be found in the bibliography, list of relevant web sites, appendices, and endnotes of the literature review.

## BACKGROUND

Alberta Education initiated the *High School Flexibility Enhancement Project* in response to expressed interests by education stakeholders to examine the time requirement attached to high school credits. It is a two-stage, four-year (2009-2013) pilot project involving one school in each of nine school jurisdictions. The purpose of the pilot project is to

- determine whether the requirement of students to have access to 25 hours of face-to-face instruction per high school course credit should be maintained;
- explore the relationship between hours of face-to-face instruction and student success; and
- explore various innovative and educationally sound high school redesigns with the purpose of benefiting students learning and success in high school.

## THE CARNEGIE UNIT

An understanding of the history of the Carnegie Unit is important in discussions about enhancing high school flexibility.

Established in 1906, the Carnegie Unit is defined<sup>1</sup> as a strictly time-based measure of educational attainment. It was developed to measure the amount of time a student spent studying a subject (e.g., 120 hours in one subject earns the student one "unit" of high school credit). Fourteen units were deemed to constitute the minimum requirement for four years of academic or high school preparation.

Researchers are questioning whether the longevity of Carnegie Unit is attributable to its adaptability or whether it is a sign of the basic calcification of education (Hamilton, 1966; Maeroff, 1993; Noone and Swenson, 2001; Shedd, 2003).

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<sup>1</sup> The Carnegie Foundation currently holds no position on the unit system. See The Carnegie Foundation for the Advancement of Teaching; <http://www.carnegiefoundation.org/about/sub.asp?key=17&subkey=1874>; Retrieved February 2009

## FOUNDATIONAL PRINCIPLES GUIDING HIGH SCHOOL REDESIGN EFFORTS

A review of the literature reveals several sets of foundational principles that are serving to guide high school redesign efforts (e.g., Association for Supervision and Curriculum Development (ASCD), the Canadian Coalition of Self-Directed Learning (CCSDL), the Coalition of Essential Schools (CES), the Learning Environments Consortium International (LEC International), the Manpower Demonstration Research Corporation (MRDC), the National Association for Secondary School Principals (NASSP), the National Conference of State Legislatures (NCSL), the School Redesign Network (SRN), and the Office of Vocational and Adult Education, U.S. Department of Education).

An analysis of these sets of principles reveals some common underlying themes. Organizations that are striving to support meaningful high school redesign are focusing on the following:

- Mastery Learning
- Rigorous and Relevant Curriculum
- Personalization
- Flexible Learning Environments
- Educator Roles and Professional Development
- Meaningful Relationships
- Home and Community Involvement

## HIGH SCHOOL REDESIGN EFFORTS IN NORTH AMERICA

Several high school redesign models and initiatives have evolved from these sets of foundational principles, many of which have been implemented in one form or another across North America over the past few decades. Some of the more intensively studied models and initiatives include the America's Choice Model; the Breaking Ranks Model; the Career Academies Model; the Early College High School Model; the First Things First Model; several Small Schools models; the Talent Development High School Model; the High Schools That Work (HSTW) School Improvement Initiative; the Model Schools Project, and several Rigor, Relevance and Relationships initiatives each of which is described in detail in the literature review. Case studies and other supporting information related to the implementations of these models and initiatives are provided in Appendices A, B, D and F.

In addition, organizations have been established in Canada and the U.S. to support those schools and districts engaged in these various initiatives (e.g., the Canadian Coalition of Self-Directed Learning, the Coalition of Essential Schools, the School Redesign Network, and the Learning Environments Consortium International).<sup>2</sup>

Collectively, these models, initiatives, and support activities illustrate some of the promising practices in high school redesign. A review of these promising practices reveals several common characteristics that can be linked to the foundational principles of high school redesign. For example, most models or initiatives

- establish high expectations for all students with respect to their preparedness for post-secondary education and/or careers;
- integrate, to varying degrees, rigorous standards-based core academic curricula with career/technical curricula;

<sup>2</sup> See the section in the literature review entitled *High School Redesign Support Activities* for more information about these organizations.

- provide extensive student supports;
- are structured around a small learning community;
- support teacher professional growth;
- actively promote meaningful and sustained student-adult relationships; and
- nurture home-school-community alliances.

## STRATEGIES THAT SUPPORT THE FOUNDATIONAL PRINCIPLES OF HIGH SCHOOL REDESIGN

According to the literature, many effective strategies exist to make high schools more supportive, more rigorous, and more oriented toward students' futures (the Coalition of Essential Schools School Benchmarks – Classroom Practices, 2009; Nair, 2003; MRDC, 2008). These strategies include but are not limited to addressing 21<sup>st</sup> century learning, assessment for learning strategies, career awareness and work internships, catch-up courses, cohort or other forms of flexible scheduling, data-based decision making, differentiating instruction, faculty advisory systems, heterogeneous grouping, inter-disciplinary and thematic instruction, professional learning communities, project-based learning, safety-net programs, universal design for learning, and using technology to personalize learning.

It is beyond the scope of the literature review to elaborate on all of these strategies however the following strategies are described in more detail<sup>3</sup> in the document:

- *Assessment for Learning Strategies*
- *Authentic Curriculum and Pedagogy* (Addressing 21<sup>st</sup> Century Skills and Providing Career Awareness and Work Internships)
- *Personalization* (Differentiating Instruction, Flexible Scheduling and Heterogeneous Grouping, and Using Technology to Personalize Learning)
- *Using Data as a Lever for Change*

According to the MRDC (2008), regardless of which combination of strategies are employed school district leaders stressed that

- the “key” strategies most likely to affect systemic change must be identified and used;
- structural change and instructional improvement were seen to be the twin pillars of effective high school redesign;
- sustained transformation requires concurrent implementation of multiple strategies; and
- redesign efforts were most effective when they were coordinated and comprehensive.

## BENEFITS OF HIGH SCHOOL REDESIGN

Literature on educational reform provides evidence that sustained efforts to transform high schools can help prepare students for the demands of a “technological and global society characterized by rapid change and

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<sup>3</sup> Where available, resources that are specific to the Alberta context have been identified to support the implementation of these strategies. Additional information related to classroom practices are provided in *Appendices C and E*.

unprecedented diversity" as well as a work environment that demands individuals who can "understand multidimensional problems, design solutions, plan their own tasks, evaluate results, and work cooperatively with others" (Lachat, 2001; Cotton, 2001; McNeil, 2003; and Darling-Hammond, 2002). These authors state that by focusing on teaching and learning to close the achievement gap, by enhancing the capacity of teachers to alter and personalize class time and instruction, and by empowering school boards and other stakeholders to reorganize and redesign the structure of their schools and classes, meaningful changes can be made to better prepare all students for engagement in college and careers in the 21<sup>st</sup> century.

In particular, the researchers agree that the following benefits can be realized by enhancing flexibility in high schools:

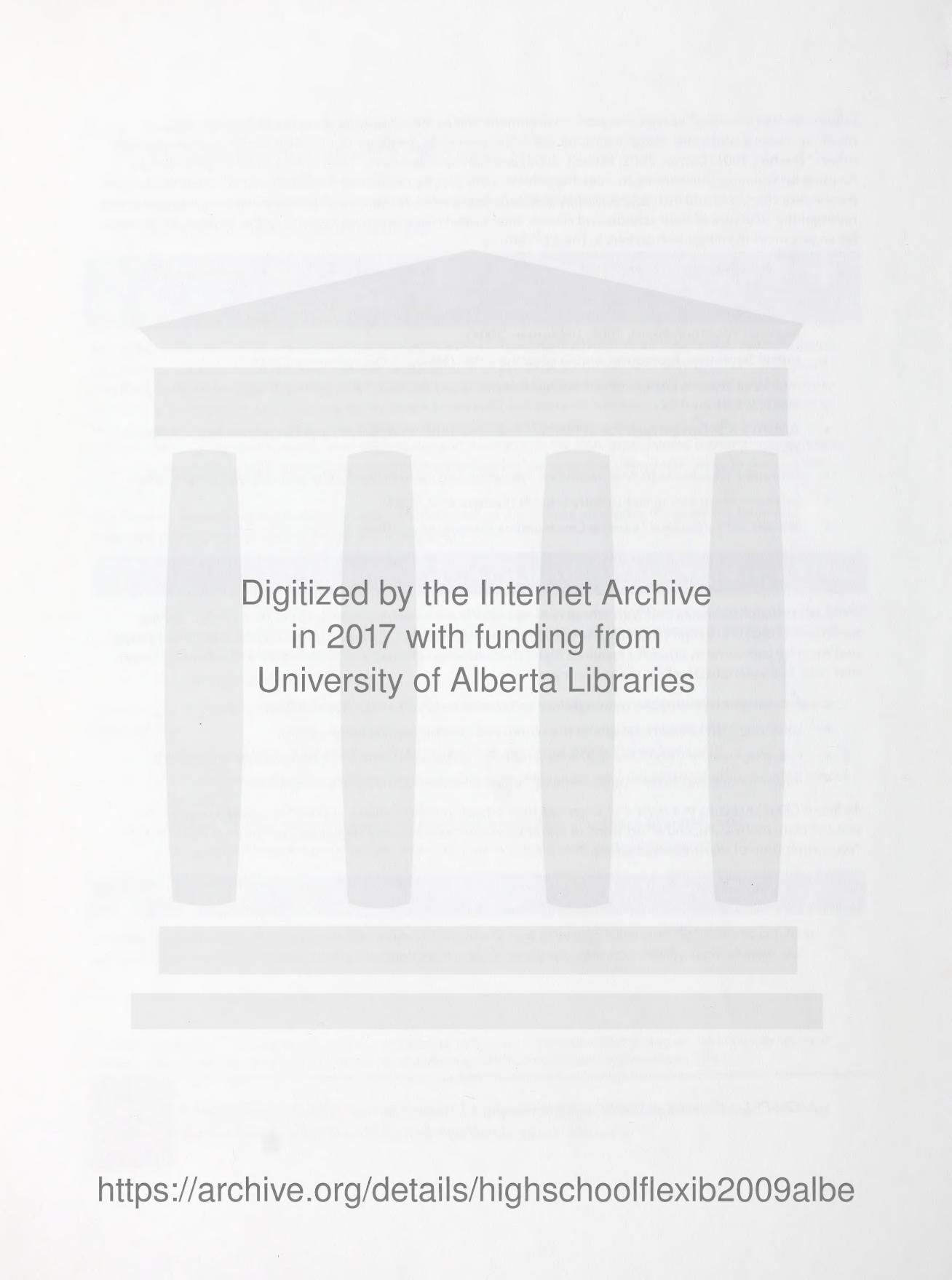
- Higher Student Achievement Levels (Quint, 2005; Kemple et al, 2005 and 2008; May et al, 2004; Southern Regional Education Board, 2005; Lieberman, 2004)
- Higher Retention, Promotion, and Graduation Rates (MRDC, 2005; Lieberman, 2004)
- Improved Student Engagement/Participation (Klem and Connell, 2008; MRDC, 2008; Kemple et al, 2008; Smith, 2007)
- Success for Disadvantaged Youth (Kemple et al, 2005 and 2008; May et al, 2004; Martinez and Klophott, 2005)
- Smoother Transitions to Post-secondary Education and Careers (Kemple et al, 2008; Lieberman, 2004)
- Safer and more Caring and Orderly Schools (Kemple et al, 2008)
- Schools as Professional Learning Communities (Kemple et al, 2008)

## CHALLENGES ASSOCIATED WITH HIGH SCHOOL REDESIGN

Although research indicates that high school redesign efforts are showing promise, Quint et al (2008), Darling-Hammond (2002), Pecheone (2006), McNeil (2003), Century and Levy (2002) and Brand (2004) identify challenges that must be overcome in order for localized high school redesign efforts to succeed. Some of the key challenges that have been identified include the following:

- Accurately estimating the required time and resources (Darling-Hammond, 2002)
- Localizing high school redesigns to the school and community (Pecheone, 2006)
- Engaging stakeholders in the high school redesign process (McNeil, 2003; Century and Levy, 2002)
- Implementing and sustaining the redesign effort over time (Century and Levy, 2002)

As Brand (2004) explains in a review of American high school transformations, successful redesign requires the unity of plan, motivation, and effort from all stakeholders to overcome any challenges that arise; it requires the "synchronization of many discrete efforts."



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